SEQUENCE LISTING

<110> Watts, Colin

<120> USE OF INHIBITORS OF MAMMALIAN
ASPARAGINAYL ENDOPEPTIDASE FOR THERAPY OF AUTOIMMUNE DISEASE

<130> ERP01.004APC

<140> 09/646,950
<141> 2000-12-08

<150> WO99/48910
<151> 1999-03-26

<150> US60/086,966
<151> 1998-05-28

<150> GB9806442.1
<151> 1998-03-26

<160> 39

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide sequence which may be comprised in a
competitive inhibitor of AEP

<400> 1
Ala Glu Asn Lys
1

<210> 2
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<213> Artificial Sequence

<220>
<223> peptide sequence which may be comprised in a
competitive inhibitor of AEP

<400> 2
Lys Asn Asn Glu
1

<210> 3
<211> 295
<212> PRT
<213> Homo sapiens

<400> 3
Met His Arg Arg Arg Ser Arg Ser Cys Arg Glu Asp Gln Pro Val Met

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Asp Asp Gln Arg Asp Leu Ile Ser Asn Asn Glu Gln Leu Pro Met Leu
            20                  25                  30
Gly Arg Arg Pro Gly Ala Pro Glu Ser Lys Cys Ser Arg Gly Ala Leu
        35                  40                  45
Tyr Thr Gly Phe Ser Ile Leu Val Thr Leu Leu Leu Ala Gly Gln Ala
    50                  55                  60
Thr Thr Ala Tyr Phe Leu Tyr Gln Gln Gln Gly Arg Leu Asp Lys Leu
65                  70                  75                  80
Thr Val Thr Ser Gln Asn Leu Gln Leu Glu Asn Leu Arg Met Lys Leu
                85                  90                  95
Pro Lys Pro Pro Lys Pro Val Ser Lys Met Arg Met Ala Thr Pro Leu
            100                 105                 110
Leu Met Gln Ala Leu Pro Met Gly Ala Leu Pro Gln Gly Pro Met Gln
        115                 120                 125
Asn Ala Thr Lys Tyr Gly Asn Met Thr Glu Asp His Val Met His Leu
    130                 135                 140
Leu Gln Asn Ala Asp Pro Leu Lys Val Tyr Pro Pro Leu Lys Gly Ser
145                 150                 155                 160
Phe Pro Glu Asn Leu Thr His Leu Lys Asn Thr Met Glu Thr Ile Asp
                165                 170                 175
Trp Lys Val Phe Glu Ser Trp Met His His Trp Leu Leu Phe Glu Met
            180                 185                 190
Ser Arg His Ser Leu Glu Gln Lys Pro Thr Asp Gln Pro Pro Lys Val
        195                 200                 205
Leu Thr Lys Cys Gln Glu Glu Val Ser His Ile Pro Ala Val His Pro
    210                 215                 220
Gly Ser Phe Arg Pro Lys Cys Asp Glu Asn Gly Asn Tyr Leu Pro Leu
225                 230                 235                 240
Gln Cys Tyr Gly Ser Ile Gly Tyr Cys Trp Cys Val Phe Pro Asn Gly
                245                 250                 255
Thr Glu Val Pro Asn Thr Arg Ser Arg Gly His His Asn Cys Ser Glu
            260                 265                 270
Ser Leu Glu Leu Glu Asp Pro Ser Ser Gly Leu Gly Val Thr Lys Gln
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Asp Leu Gly Pro Val Pro Met
    290                 295
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<210> 4
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<213> Artificial Sequence

<220>
<223> sequence preceding tetanus toxin fragment

<400> 4

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Gly His Ile Glu Gly Arg His Ile
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<210> 5
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<213> Artificial Sequence

<220>
<223> primer

<400> 5

cgctacactc cgaacgcggc gatcgattct ttcgtt 36

<210> 6
<211> 24
<212> DNA
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<220>
<223> primer

<400> 6
agcggataac aatttcacac agga 24

<210> 7
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<220>
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<400> 7
gtaaaacgac ggccagt 17

<210> 8
<211> 24
<212> PRT
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<220>
<223> synthetic transferrin peptide

<400> 8
Gln Gln Gln His Leu Phe Gly Ser Asn Val Thr Asp Cys Ser Gly Asn
1 5 10 15
Phe Cys Leu Phe Arg Lys Lys Lys
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<210> 9
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<212> PRT
<213> Artificial Sequence

<220>
<223> cleavage fragment from synthetic transferrin peptide

<400> 9
Gln Gln Gln His Leu Phe Gly Ser Asn
1 5

<210> 10
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<220>
<223> cleavage fragment from synthetic transferrin peptide

<400> 10

Val Thr Asp Cys Ser Gly Asn Phe Cys Leu Phe Arg Lys Lys Lys
1 5 10 15

<210> 11
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<220>
<223> cleavage fragment from synthetic transferrin peptide

<400> 11
Phe Cys Leu Phe Arg Lys Lys Lys
1 5

<210> 12
<211> 21
<212> PRT
<213> Homo sapiens

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1 5 10 15
Phe Cys Leu Phe Arg
20

<210> 13
<211> 16
<212> PRT
<213> Homo sapiens

<400> 13
Gln Gln Gln His Leu Phe Gly Ser Asn Val Thr Asp Cys Ser Gly Asn
1 5 10 15

<210> 14
<211> 5
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<213> Homo sapiens

<400> 14
Phe Cys Leu Phe Arg
1 5

<210> 15
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<400> 15
Val Thr Asp Cys Ser Gly Asn Phe Cys Leu Phe Arg
1 5 10

<210> 16
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<213> Homo sapiens

<400> 16
Gln Gln Gln His Leu Phe Gly Ser Asn
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<210> 17
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<213> Homo sapiens

<400> 17
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Leu Gly Arg Arg Pro Gly Ala Pro Glu Ser Lys Cys Ser Arg Gly Ala
            20                  25                  30
Leu Tyr Thr Gly Phe Ser Ile Leu Val Thr Leu Leu Leu Ala Gly Gln
        35                  40                  45
Ala Thr Thr Ala Tyr Phe Gln Gln Gln Gly Arg Leu Asp Lys Leu Thr
    50                  55                  60
Val Thr Ser Gln Asn Leu Gln Leu Glu Asn Leu Arg Met Lys Leu Pro
65                  70                  75                  80
Lys Pro Pro Lys Pro Val Ser Lys Met Arg Met Ala Thr Pro Leu Leu
                85                  90                  95
Met Gln Ala Leu Pro Met Gly Ala Leu Pro Gln Gly Gln Asn Ala Thr
            100                 105                 110
Lys Tyr Gly Asn Met Thr Glu Asp His Val Met His Leu Leu Gln Asn
        115                 120                 125
Ala Asp Pro Leu Lys Val Tyr Pro Pro Leu Lys Gly Ser Phe Pro Glu
    130                 135                 140
Asn Leu Thr His Leu Lys Asn Thr Met Glu Thr Ile Asp Trp Lys Val
145                 150                 155                 160
Phe Glu Met His His Trp Leu Leu Phe Glu Met Ser Arg His Ser Leu
                165                 170                 175
Glu Gln Lys Pro Thr Asp Ala Pro Pro Lys Glu Ser Leu Glu Leu Glu
            180                 185                 190
Asp Pro Ser Ser Gly Leu Gly Val Thr Lys Gln Asp Leu Gly Pro Val
        195                 200                 205
Pro Met
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<210> 18
<211> 10
<212> PRT
<213> Clostridium tetani

<400> 18
Arg His Ile Asp Asn Glu Glu Asp Ile Asp
 1               5                  10

<210> 19
<211> 10
<212> PRT
<213> Clostridium tetani

<400> 19
Tyr Thr Pro Asn Asn Glu Ile Asp Ser Phe
 1               5                  10

<210> 20
<211> 10
<212> PRT
<213> Clostridium tetani

<400> 20
Gly Asn Ala Phe Asn Asn Leu Asp Arg Ile
1 5 10

<210> 21
<211> 10
<212> PRT
<213> Unknown

<220>
<223> commercial ribonuclease

<400> 21
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<210> 22
<211> 10
<212> PRT
<213> Unknown

<220>
<223> commercial ribonuclease

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<210> 23
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<213> Phasianidae gen. sp.

<400> 23
Gly Thr Ser Val Asn Val His Ser Ser Leu
1 5 10

<210> 24
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<400> 24
Gly Asn Gly Met Asn Ala Trp Val Ala Trp
1 5 10

<210> 25
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<213> Phasianidae gen. sp.

<400> 25
His Gly Leu Asp Asn Tyr Arg Gly Tyr Ser

1 5 10

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<400> 26
Ile Leu Gln Ile Asn Ser Arg Trp Trp Cys
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<400> 27
Val Ser Asp Gly Asn Gly Met Asn Ala Trp
1 5 10

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<400> 28
Arg Trp Trp Cys Asn Asp Gly Arg Thr Pro
1 5 10

<210> 29
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<400> 29
Val Ala Trp Arg Asn Arg Cys Lys Gly Thr
1 5 10

<210> 30
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<212> PRT
<213> Homo sapiens

<400> 30
Leu Phe Gly Ser Asn Val Thr Asp Cys Ser
1 5 10

<210> 31
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<400> 31
Asp Cys Ser Gly Asn Phe Cys Leu Phe Arg
1 5 10

<210> 32
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<400> 32
Lys Gly Ile Gly Ser Gly Lys Val Leu Lys Ser Gly Pro Gln Cys
 1               5                  10                  15

<210> 33
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<220>
<223> peptide sequence control for a competitive
      inhibitor of AEP

<400> 33
Ala Glu Gln Lys
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<210> 34
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<220>
<223> peptide sequence control for a competitive
      inhibitor of AEP

<400> 34
Lys Gln Gln Glu
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<210> 35
<211> 7
<212> PRT
<213> Homo sapiens

<400> 35
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<210> 36
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<212> PRT
<213> Homo sapiens

<400> 36
Asn Thr Met Glu Thr Ile
 1               5

<210> 37
<211> 5
<212> PRT
<213> Homo sapiens

<400> 37
Asn Leu Arg Met Lys
 1               5

<210> 38
<211> 19
<212> PRT
<213> Homo sapiens

<400> 38
Cys Val Phe Pro Asn Gly Thr Glu Val Pro Asn Thr Arg Ser Arg Gly
 1               5                  10                  15
His His Asn

<210> 39
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<213> Homo sapiens

<400> 39
Ala Thr Lys Tyr Gly Asn Met Thr Gly Asp His Val Met His Leu Leu
 1               5                  10                  15
Gln Asn Ala